

AMENDMENTS TO THE CLAIMS

- 1 (currently amended). A method for identifying antibacterial agents comprising: ~~depleting bacteria of a strain comprising a luxAB construct of Ca²⁺~~; incubating the ~~a~~ Ca²⁺ depleted bacteria of a strain comprising a luxAB construct with an agent the antibacterial effect of which shall be determined, recording the light emitted by the bacteria upon addition of an aldehyde, the incubation being carried out at a temperature which is at least 10° C higher than the temperature at which the light is emitted by the bacteria, ~~preferably at least 15° C higher.~~
- 2 (original). The method of claim 1, wherein said strain is a natural or mutant *Yersinia* sp. strain.
- 3 (original). The method of claim 2, wherein the strain is a *Yersinia pseudotuberculosis* strain.
- 4 (original). The method of claim 1, wherein the incubation temperature is ~~about 21° C~~ about 37° C and the emission temperature is ~~about 37° C~~ about 21° C, respectively.
- 5 (currently amended). A method for identifying antibacterial agents comprising:
- providing a *Yersinia* sp. bacterial strain comprising a luxAB construct;
 - propagating the strain at room temperature in a Ca²⁺ depleting medium to obtain a suspension of Ca²⁺ depleted bacteria containing the luxAB construct;
 - dissolving ~~a measured amount of~~ a sample of an antibacterial agent candidate in ~~water, a mixture of water and of an organic solvent or an organic solvent;~~ organic a solvent to prepare a solution of the agent;
 - combining the solution of the agent with an aliquot of the bacterial suspension to obtain a test suspension;
 - incubating the test suspension at a first temperature for a selected period of time;
 - raising the temperature of the test suspension to a second temperature;
 - continuing incubation at the second temperature for a ~~selected~~ period of time;

- lowering the temperature of the test suspension to a third temperature;
- continuing the incubation at the third temperature for a ~~selected~~ period of time;
- adding n-decanal or a functionally equivalent aldehyde thereto to the test suspension;
- measuring light emitted from the test suspension over a period of time at the third temperature;
- quantifying the light emitted; and
- calculating an antibacterial activity based on the quantity of emitted light,

wherein said first and third temperature is from 20° C to 26° C and the second temperature is about 37° C.

6 – 7 (canceled).

8 (original). The method of claim 5, wherein the aldehyde is added to the test suspension in form of an aqueous emulsion.

9 (currently amended). The method of claim 5, where in the measured amount of sample is selected to provide a concentration of the agent in the test suspension from 10 ~~µg~~ µg per mL to 100 ~~µg~~ µg per mL.

10 (currently amended). The method of claim 5, further comprising determining wherein the light emitted is less than 20 % of that emitted in ~~an~~ the same experiment in which no anti-bacterial agent had been added.

11 (currently amended). The method of claim 5, further comprising determining wherein the light emitted is less than 40 % of that emitted in ~~an~~ the same experiment in which no anti-bacterial agent had been added.

12 (currently amended). The method of claim 5, further comprising determining wherein the light emitted is less than 60 % of that emitted in ~~an~~ the same experiment in which no anti-bacterial agent had been added.

13 (canceled).

14 (currently amended). ~~A probe for identifying antibacterial agents comprising a~~ The method of Claim 4, wherein the strain is a *Yersinia pseudotuberculosis* strain selected from the group consisting of pIB29EL, pIB29AL, pIB102AL, optionally also from pIB102EL pIB102FL and pIB102FΔhlhL.

15 (canceled).

16 (currently amended). ~~An agent capable~~ A method of decreasing bacterial virulence of Gram-negative bacterial having a type II secretion(TTS) system comprising the exposing said bacteria to a structural element X-CO-NH-Y-Z, wherein X is aromatic or heteroaromatic carbon, Y is zero absent or is -N=CH, and Z is unsubstituted or substituted aryl including or heteroaryl.

17 (currently amended). ~~An agent capable of decreasing bacterial virulence-~~ The method of claim 16, wherein the structural element is of the general formula I



wherein

A is substituted or unsubstituted aryl or heteroaryl;

B is -X-Y, wherein X is zero absent or is -N=CH- and Y is selected from the group consisting of unsubstituted aryl, unsubstituted heteroaryl, mono-, di- and tri-substituted aryl, and mono-, di- and tri-substituted heteroaryl, with the proviso that, if X is -N=C-H-, Y is 2-hydroxyaryl.

18 (currently amended). ~~The agent~~ method of claim 17, wherein, ~~if A is substituted aryl or heteroaryl, it is preferred to be mono- or disubstituted by~~ at least one or more of halogen, nitro, hydroxy, alkoxy, C₁-C₆ alkyl, and C₁-C₆ alkenyl.

19 (currently amended). The agent method of claim 17, wherein Y is ~~selected from aryl and~~ or heteroaryl substituted with at least one or several of halogen, C₁-C₆ alkyl, or C₁-C₆ alkenyl.

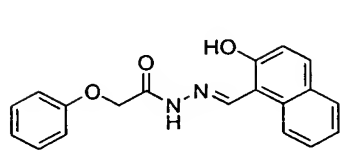
20 - 21 (canceled).

22 (currently amended). A method of screening for agents inhibiting virulence in Gram-negative bacteria having a type III secretion (TTS) system, the method ~~being carried out in absence of eukaryotic cells~~, comprising contacting in absence of eukaryotic cells a gram-negative bacterium culture depleted in Ca²⁺, ~~in particular a *Yersinia* species~~, comprising a luxAB reporter gene construct, with a potentially bacterial virulence inhibiting agent, thereby forming a test suspension, manipulating the temperature of the test suspension and adding an aliphatic aldehyde to make the bacterium emit light, measuring the emitted light, comparing the amount of emitted light with the light emitted in absence of the bacterial virulence inhibiting or activating agent.

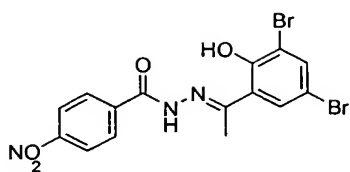
23 (currently amended). [[A]] The method of claim 22, wherein said screening for agents ~~activating bacterial virulence, the method being carried out in absence of eukaryotic cells, comprising contacting a gram-negative bacterium culture enriched in Ca²⁺, in particular is of a *Yersinia* species, comprising a luxAB reporter gene construct, with a potentially bacterial virulence activating agent, thereby forming a test suspension, manipulating the temperature of the test suspension and adding an aliphatic aldehyde to make the bacterium emit light, measuring the emitted light, comparing the amount of emitted light with the light emitted in absence of the bacterial virulence inhibiting or activating agent.~~

24 - 29 (canceled).

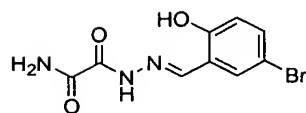
30 (New). A compound capable of reducing virulence in Gram-negative bacterial having a type III secretion (TTS) system selected from the group consisting of:



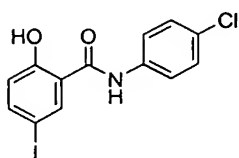
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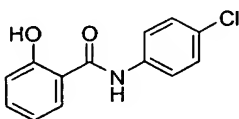
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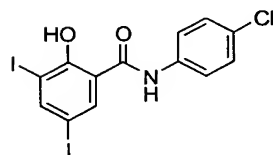
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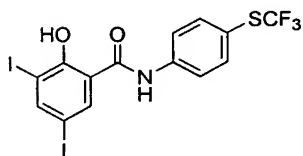
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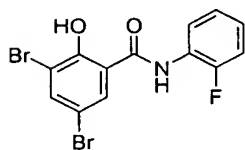
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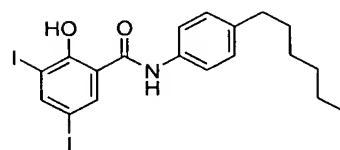
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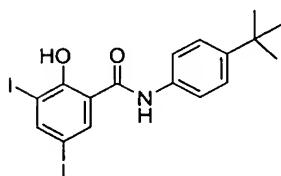
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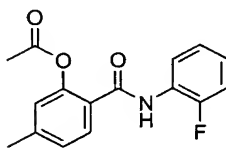
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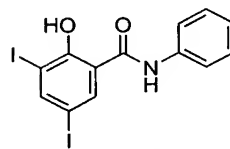
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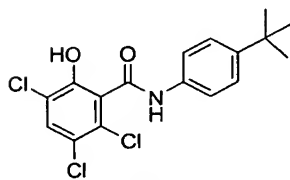
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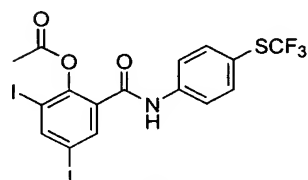
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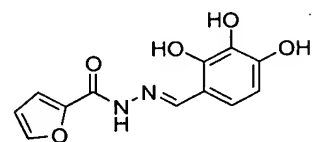
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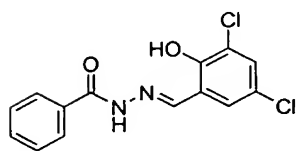
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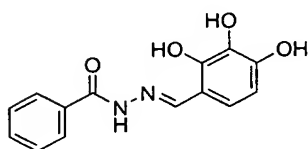
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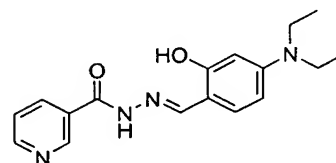
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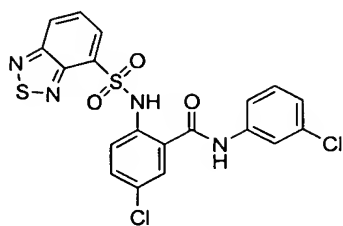
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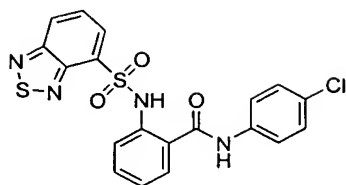
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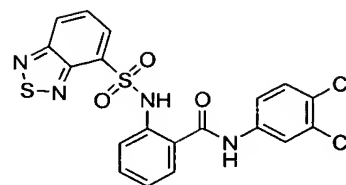
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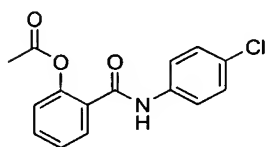
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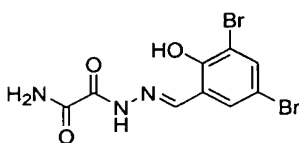
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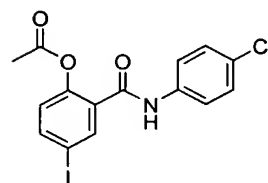
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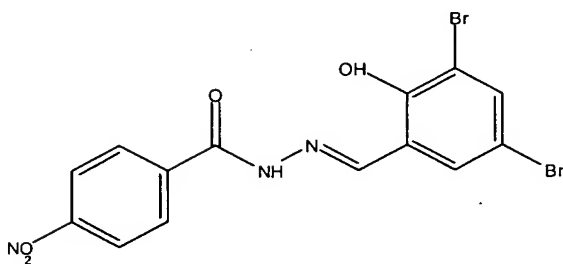


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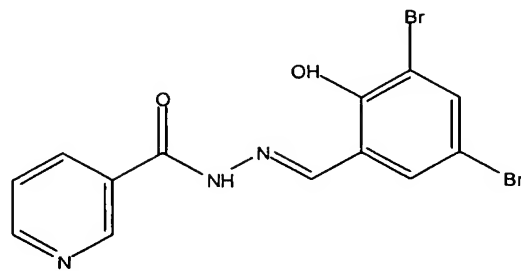


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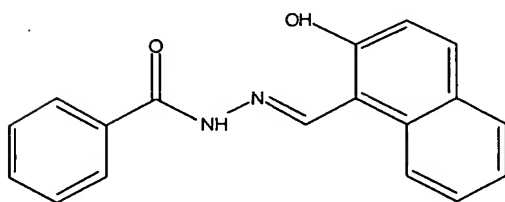
31 (New). The method of claim 16, wherein the structural element is selected from the group consisting of:



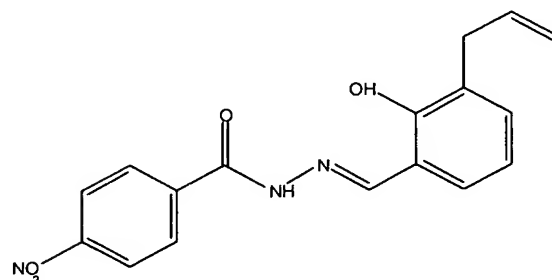
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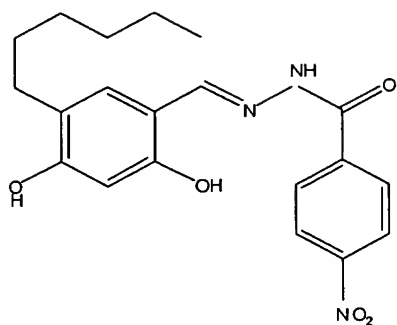


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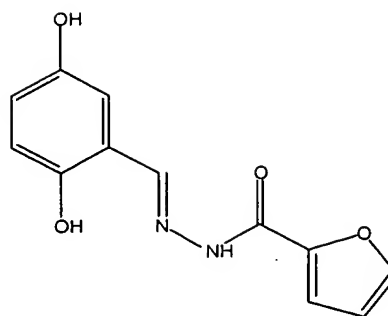


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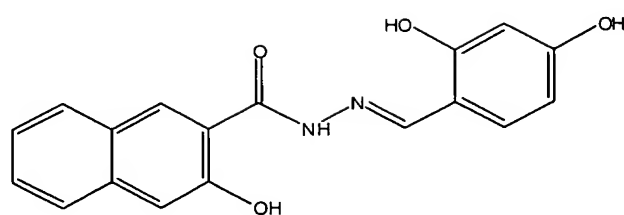
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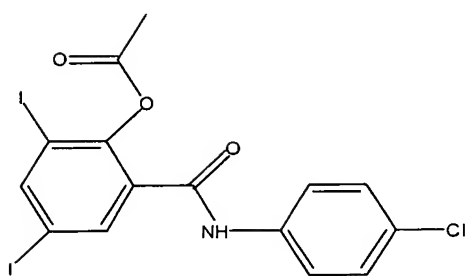
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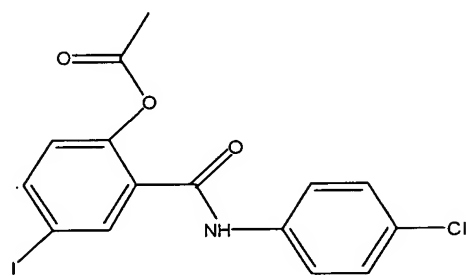
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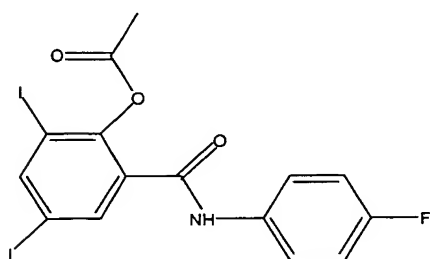
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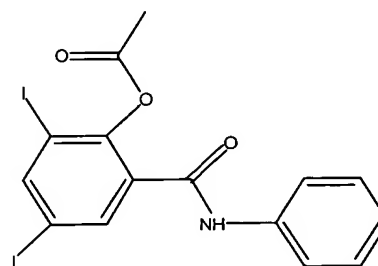
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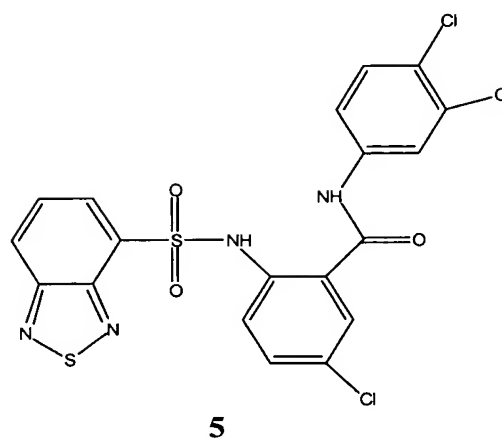
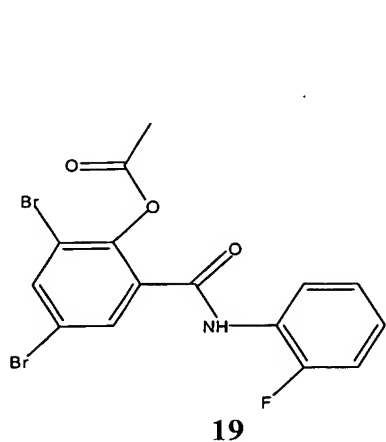
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32 (New). The method of claim 1, wherein the incubation being carried out at a temperature which is at least 15° C higher than the temperature at which the light is emitted by the bacteria